

REMARKS

Entry of this amendment is respectfully requested.

Claims 25-27 and 29-35 were finally rejected under 35 U.S.C. §102(b) over Coustet. Claim 28 was rejected under 35 U.S.C. §103(a) over Coustet and Lingle. Applicants respectfully traverse each of these rejections.

Coustet refers to a different system comprising Ag. This system has nothing to do with the presently claimed invention.

Although claim 25 of the application comprises the word "comprising", the application refers to a coating resulting in a high reflectance with regard to infrared radiation, which does not comprise silver, because silver is used in a low-e coating. Thus, the coatings of the presently claimed invention and the coatings disclosed by Coustet have completely different properties.

The presently claimed invention relates to a solar control coating and addresses the problem of providing a coating on a substrate which can withstand temperature stresses during the bending of the substrate. This coating results in a high reflectance of infrared radiation. The coating has also specific color values.

The solar control coating is a dielectric filter which reflects infrared radiation but not visible light.

In contrast, the low-e coating disclosed by Coustet is an electric filter which absorbs infrared radiation. A low-e coating comprises a metal with a low surface resistance such as Cu or Ag. The surface resistance can be calculated according to the formula

$$R = \frac{\pi}{\ln(2)} \left(\frac{U}{I} \right) = 4.5324 \left(\frac{U}{I} \right)$$

(compare col. 3, line 37 of US 7,414,738 B2).

Thus, because the ability to absorb infrared radiation depends on the surface resistance, a lower coating is an electrical filter and not a dielectric filter. The lower the surface resistance, the lower the emissivity E of a low-e coating, i.e. the more infrared radiation is absorbed by the low-e coating.

However, to obtain a solar control coating, it is important that the layers have a specific arrangement with a defined layer thickness. Furthermore, it is important that the layers have a defined index of refraction at a certain wavelength (compare page 3, lines 35 and 36 of the application). Thus, for a solar control coating it is important that the index of refraction at the infrared range is such that the infrared radiation is reflected.

For the coatings which are arranged to a layer of Ag in a low-e coating it is not of interest that these layers have a defined index of refraction because these layers are only used as protective layers to avoid that the Ag layer can be oxidized and thus can be destroyed.

Thus, it is not possible to take an Si₃N₄ layer which is disclosed by Coustet, just because Coustet discloses such an Si₃N₄ layer.

It is clear to a person skilled in the art that if he, for instance, wanted to substitute the Si₃N₄ layer of claim 25 by the Si₃N₄ layer of Coustet, he would have to adjust the layer thickness

and the index of refraction at a certain wavelength to obtain a layer which has the properties which are necessary to obtain a layer system of claim 1.

To adjust the thickness and index of refraction of a layer to certain values, however, does involve an inventive step.

The Examiner's statement that a reference may be relied upon for all that it would reasonably suggest one having ordinary skill in the art including non preferred embodiments (compare page 6 of the office action), is used to justify arguments which are hindsight. Even if it was reasonable to include non preferred embodiments, a person skilled in the art could not interpret the application and claim 25 in such a way that its content is not covered by the description and the claims. It is respectfully submitted that for a person skilled in the art it is not reasonable that the layer system of claim 25 and of the description does include a coating which comprises Ag. Therefore, the invention of Coustet and the invention of the presently claimed cannot be compared with each other as done by the Examiner, so that also claim 25 is allowable over Coustet.

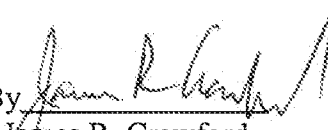
The remaining claims are also believed to be allowable since they depend from claim 25, since claim 25 is allowable for reasons set forth above.

In view of the foregoing, allowance is respectfully requested.

The Commissioner is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 50-0624, under Order No. SANZ-278-US.

Respectfully submitted

FULBRIGHT & JAWORSKI L.L.P.

By 
James R. Crawford
Reg. No. 39,155

666 Fifth Avenue
New York, New York 10103
(212) 318-3000